

## STATEMENT OF CONSIDERATIONS

REQUEST BY COMPAQ FEDERAL, LLC, FOR AN ADVANCE WAIVER OF THE GOVERNMENT'S DOMESTIC AND FOREIGN PATENT AND COPYRIGHT RIGHTS FOR ITSELF AND FOR SUBCONTRACTORS UNDER SUBCONTRACTS ISSUED BY COMPAQ FOR THE ACCELERATED STRATEGIC COMPUTING INITIATIVE; DOE WAIVER NO. W(A)2000-015

Compaq Federal, LLC (Compaq) has requested, for itself (as the first-tier subcontractor) and for its second-tier subcontractors, a waiver of all domestic and foreign rights to inventions conceived or first reduced to practice in the course of work performed, and to copyrights created in the performance of work, in connection with the production of a thirty trillion operations per second (30 TeraOPS) supercomputing system under the Accelerated Strategic Computing Initiative (ASCI).

Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and Sandia National Laboratories (SNL) (jointly referred to as the Laboratories) are working on ASCI to develop supercomputers for Department of Energy (DOE) program needs. To meet the requirements of DOE's Stockpile Stewardship and Management Program (SSP), DOE is enhancing its computational power by developing supercomputers with the capability of performing tera-scale computing.

Stockpile Stewardship describes DOE's management of the nuclear weapons program. It is comprised of the activities associated with the evaluation of the aging U.S. nuclear weapons stockpile and the certification of their safety, reliability, and performance. These activities have been performed at the three DOE weapons laboratories and the Nevada Test Site (NTS). In 1992, the United States declared a moratorium on underground nuclear testing, and, in 1995, President Clinton extended the moratorium and decided to pursue a "zero yield" Comprehensive Test Ban Treaty (CTBT). Even with these significant changes, DOE's responsibilities for the nuclear weapons stockpile continue, and the President and Congress have directed DOE to continue to maintain the safety and reliability of the enduring nuclear weapons stockpile. In response to direction from the President and Congress, DOE has developed its stockpile stewardship program to provide a single, highly integrated technical program for maintaining the continued safety and reliability of the nuclear weapons stockpile. The SSP consists of two basic components: experimentation and computational modeling and simulation. The development of advanced computational modeling and simulation capability has been organized via the DOE ASCI Program.

ASCI's mission is to promptly shift from nuclear test-based methods to computational-based methods for ensuring the safety, reliability, and performance of our nuclear weapons stockpile. ASCI will create predictive simulation and virtual prototyping capabilities based on advanced weapon codes, and it will accelerate the development of high-performance computing far beyond what might be achieved in the absence of a focused initiative. ASCI will also provide the ability to assess, evaluate, maintain, and prototype nuclear weapons and weapons components in the absence of nuclear testing and with a greatly reduced weapons manufacturing infrastructure.

Thus, to meet the programmatic needs of DOE's stockpile stewardship and management program, the ASCI Program has been developing several generations of computers. In 1995, INTEL was selected for the ASCI Option Red System, and demonstrated one trillion operations per second computational speed. In 1996, Silicon Graphics, Inc. (SGI) was selected for the ASCI Blue Mountain system. This \$121 million contract was awarded to build a supercomputer (SGI ORIGIN2000 SP) system consisting of clusters of shared-memory processors. The initial components were delivered to LANL in January 1997. In November 1998, this system was upgraded to a system with a computational speed of three trillion operations per second (3 TeraOPS). In parallel with this effort, IBM is providing a 3 TeraOPS system to LLNL over a comparable time period. In calendar year 2000, IBM is scheduled to deliver a follow-on to the Blue Pacific System at LLNL, called the ASCI White system, composed of IBM RS/6000 SP elements. The ASCI White system will have a peak performance rating of approximately 10 TeraOPS.

### The 30 TeraOPS Phase of the ASCI Project

ASCI will continue to implement its high-end computing strategy by pursuing a thirty trillion operations per second (30 TeraOPS) clustered supercomputing system. Los Alamos National Laboratory has been designated as the lead laboratory for the competitive procurement of this next generation ASCI system. Delivery of the 30 TeraOPS system is anticipated to be in mid-2001.

The cornerstone of the ASCI program is to accelerate development of key high-performance computing technologies that would subsequently be economically sustained in the marketplace. The technologies to be developed are expected to be part of Compaq's current business plan, but would not otherwise be available in the time frame needed or at the scale/performance level required by the ASCI Program. More than Compaq's technology, it is the acceleration of the development and expansion of capability that is desired. Therefore, it is anticipated that in order to obtain certain system features in the time frame required, joint collaborative efforts, at present uncharacterized, between the Laboratories and Compaq, as the ASCI subcontractor, will be required. Thus, although the primary objective of the intended subcontract will be to perform the ASCI mission and exploit the capabilities of the Compaq's computing system(s) to be installed during the course of the subcontract and within the scope of the subcontract, Compaq and the Laboratories may engage in joint collaborative activities of mutual interest and benefit.

Data already in existence, i.e., developed at private expense, will be delivered and treated as Proprietary Data, with Restricted Rights pursuant to the "Rights in Data - General" clause (Form 7500), perhaps augmented by Compaq's Software License(s).

Before issuing the formal 30 TeraOPS Subcontract to Compaq, it would be of great value if an Advance Waiver could be provided in order to enable Compaq to adequately address the ASCI requirements. The present Advance Waiver will also apply to qualified second-tier subcontracts that Compaq issues, and the patent and copyright rights defined in the Advance Waiver will attach to Compaq's qualified subcontractors (i.e., the rights provided in the Advance Waiver will

flow down to Compaq subcontractors that qualify for the Waiver and will not be retained by Compaq).

Therefore, in order to achieve the above-identified goals, the Laboratories are seeking approval from DOE for Compaq and its second-tier subcontractors to receive an Advance Waiver which implements the concepts set forth below. DOE Patent Counsel will qualify each of Compaq's subcontractors by written certification that the Advance Waiver is applicable to its subcontract. Such certification will include a determination whether the particular subcontractor is an U.S. Company and verification of the acceptability of the terms and conditions of the subcontract to the particular subcontractor. If any of Compaq's subcontractors does not qualify for this Advance Waiver or is not satisfied with the terms and conditions of the subcontract necessary to qualify for this Waiver, then that company may separately petition DOE for its own Advance Waiver or an Identified Invention Waiver to obtain title to specific subject inventions. Compaq agrees to include the provisions of this Advance Waiver in any subcontracts where the subcontractor is to receive the benefit of the Waiver.

#### Compaq's Contribution to the 30 TeraOPS Phase of the ASCI Project

In order to stay within the fiscal constraints of the program, Compaq will contribute at least a 20% share of the total cost of the contract. More specifically, the agreed-upon contract price reflects a more than 20% in-kind cost contribution to the subcontract effective at the date of the execution of the contract. Compaq further agrees to contribute at least 20% of the collaborative effort, if any occurs.

#### A. The Allocation of Patent Rights:

Based on Compaq's contribution as described above, the DOE agrees to waive, in advance, to Compaq and to its second-tier subcontractors patent rights in its subject inventions. However, if Compaq chooses a sub-contractor that is a domestic small business or non-profit organization, that subcontractor will retain the patent rights to its subject inventions under the Bayh-Dole Act. See 35 USC 200-212. Additionally, if Compaq chooses to obtain work from national laboratories under other contractual arrangements outside of the current subcontract, the present waiver does not apply to work done by national laboratories in such circumstances. Based on Compaq's contribution as described above, its non-Bayh-Dole subcontractor(s) may obtain, in advance, upon DOE certification as described above, a waiver of patent rights in that subcontractor's subject inventions.

With respect to Patent Rights, a standard DOE Patent Rights Clause including the waiver will contain the following provisions: (a) Any waived rights to inventions will be subject to a reserved government use license as follows: The government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world; (b) The government will have march-in-rights to any subject inventions consistent with the march-in-rights set out in 35 U.S.C. 203 and 48 C.F.R. 27.304-1(g); (c) The recipient of such rights agrees to submit, upon request of DOE, a non-proprietary report no more frequently than annually on efforts to utilize any technology arising under the contract; (d) Any assignment of invention rights is subject to DOE

approval; (e) The recipient agrees to a United States Competitiveness provision (see Appendix A); and (f) U.S. Preference per 35 U.S.C. 204 will apply.

**B. Compaq Can Assert Copyright in Computer Software:**

Based on Compaq's contribution as described above, the DOE hereby agrees, in advance, to authorize Compaq to assert copyright without the Contracting Officer's prior approval in software produced under the subcontract by its employees. The right to assert copyright is subject to a limited government-use license for a period of five years to allow Compaq sufficient time to commercialize the computer software.

In the limited government-use license, Compaq grants to the government and others acting in its behalf, a paid-up nonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government. The limited government-use license in copyrighted computer software will revert to a broad Government license, which allows the Government additionally to distribute copies to the public, at the end of five (5) years. Also, the limited government-use license in copyrighted computer software will revert to a broad Government license at any time during the five year term, if DOE march-in rights are exercised, for example, where Compaq has not taken effective steps to commercialize the software. A modified version of a portion of the FAR Rights in Data Clause of 48 CFR 52.227-14 that has previously received DOE approval for the ASCI program is set forth below in Appendix A.

**Government Rights**

The Government's rights in intellectual property as set out in Paragraphs A. and B. above, e.g., licenses, apply only to intellectual property developed under collaborative efforts and not to Compaq's intellectual property that is already in existence or that is developed by Compaq at private expense.

**Export Control**

With respect to patents and copyrights, Compaq agrees to abide by the export control laws and will remind its licensees, if any, to do the same. Also, Compaq will remind its subcontractors, if any, to abide by the export control laws.

**Conclusion**

Compaq is a U.S. company, with extensive background in the supercomputer technology. There was adequate notice of the issuance of the subject RFP and an open, competitive bid process was used in choosing Compaq as the subcontractor for this phase of the ASCI program. Technical experts from each Laboratory reviewed all of the proposals and based their initial selection of proposals on technical capability of the companies, price information and adequacy of deliverables.


Compaq stands ready to deliver a low-risk, high-performance system with superior overall performance and usability. System software and compiler technology have a proven track record. Compaq's proposed upgrade options provide for increasing capacity and capability up to 100 TeraOPS for effective ASCI implementation.

This Advance Waiver and the terms of the intellectual property clauses included within the Compaq's subcontracts are meant to cover the scope of the work under the 30 TeraOPS phase of the ASCI Program and shall not serve as precedent for any follow-on work to be negotiated separately with other subcontractors in the future. Also, this Advance Waiver shall apply to second-tier subcontracts that Compaq (the first-tier subcontractor) issues.

DOE Patent Counsel will qualify each of Compaq's subcontractors by written certification that this Advance Waiver is applicable to its subcontract. Such certification will include a determination whether Compaq's subcontractor is a U.S. company, and verification of the acceptability of the terms and conditions of the subcontract. If any of Compaq's subcontractors does not qualify for this Advance Waiver or is not satisfied with the terms and conditions of the subcontract necessary to qualify for this Waiver, then that company may separately petition DOE for its own Advance Waiver or an Identified Invention Waiver to obtain title to specific subject inventions. Compaq agrees to include the provisions of this Advance Waiver in any subcontracts where the subcontractor is to receive the benefit of the Waiver.

Compaq agrees to abide by the export control laws and will remind its licensees and subcontractors, if any, to do the same.

Accordingly, for the foregoing reasons, and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted for Compaq and its second-tier subcontracts, which meet the above requirements.

  
Dickson G. Kehl  
Patent Counsel  
DOE, Albuquerque Operations Office, NM

Date: July 20, 2000

Based on the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by waiver of the United States' domestic and foreign patent rights and copyright in software as set forth herein, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the subcontract where, through such modification or extension, the purpose, scope or DOE cost of the subcontract has been substantially altered. This waiver shall not affect any waiver previously granted.

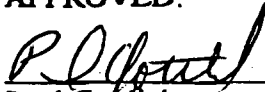
## CONCURRENCE:



Dr. Paul Messina  
Director of Office of Advanced  
Simulation and Computing (DP-14)

Date: 7/20/00

## APPROVED:



Paul Gottlieb  
Assistant General Counsel for  
Technology Transfer and Intellectual Property (GC-62)

Date: 7-22-00